

The EU is unlikely to embrace shale gas as an alternative to Russian gas imports

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*The reliance of European states on gas imports from Russia has been one of the key underlying factors shaping the EU's response to the Ukraine crisis. However could the use of shale gas help to reduce the EU's energy dependence on Russia? **Corey Johnson** assesses the varying policy responses in European countries, noting that while some states such as Poland have been vocal in their support for shale gas, it is unlikely to enable a significant shift away from Russian gas in the short-term.*



The Ukraine crisis has laid bare both the EU's lack of a coherent energy policy and the unsavoury politics of Europe's dependence on Russian natural gas. My travels through Moldova and Ukraine last spring, as well as past work in Poland, Russia, and Azerbaijan, confirmed for me that these would have been interesting times in shaping the future of natural gas markets in Europe even if the last ten months' dramatic events in Ukraine had not occurred. Given all that has happened – Russia's occupation of Crimea, ongoing strife in eastern Ukraine, and the crash of flight MH17 – more fundamental shifts in Europe's energy landscape are possible, including the widespread embrace of domestic sources of untapped unconventional hydrocarbons, including shale gas, but such a shift appears unlikely.

Europe's changing energy landscape

In 2013 Russian President Vladimir Putin decided to move forward with the construction of a South Stream pipeline under the Black Sea in spite of a competing project to move gas from Azerbaijan's Shah Deniz field to European markets via Turkey and a newly constructed Trans-Adriatic Pipeline (TAP) also moving forward. This bold – some might say foolhardy – move raised questions in many observers' minds of where all of this gas would be burned and, more importantly, at what price it could be sold.

Figure 1: Proposed route of the South Stream pipeline



Note: Image created by [San Jose/Patrol110](#) (CC-BY-SA-3.0)

Meanwhile, the completion of the second parallel line of the Nord Stream pipeline linking Russia and Germany under the Baltic Sea further locked in not just Germany, but also the Netherlands and several other EU member states into deliveries of Russian gas – and why not? Russia had proven a reliable supplier to non-Warsaw Pact countries since the depths of the Cold War. The Soviet Union had been reliable for much the same reason Russia continued the streak: it needed the cash. Yet, and quite by design, Nord Stream and South Stream were designed to bypass other states that had depended on Russian energy for even longer, notably Belarus and Ukraine, while the new Azerbaijan gas transit links opted for a cheaper alternative via the Adriatic to Italy over the EU's favoured Southern Corridor pipeline, Nabucco, which would have passed through Bulgaria, Romania, and Hungary (all heavily dependent on Gazprom gas) en route to Austria.

Figure 2: Existing gas pipelines from Russia to Europe



Note: Image created by [Dr A Judge](#) (CC-BY-SA-3.0)

As my colleague Tim Boersma and I [have argued](#), even the dramatic Russian invasion of Crimea last spring and events in eastern Ukraine did little to change the underlying reality of Europe's dependence on Russian gas. In short, the EU and its member states, who carry the primary responsibility for developing and implementing energy policies, simply do not have the appetite for the economic and political upheavals a coordinated embargo of Russian energy would cause. Nor is it in anyone's interest to have Russia – a nuclear power with serious imperial baggage and the largest country in the world – unable to sell its hydrocarbons, an important fact that is often ignored amid retributive blustering. The shooting down of MH17 in eastern Ukraine, an act that killed 200 Dutch nationals, has

caused the Netherlands to [reassess](#) its cosy relations with the Kremlin, but whether the country is willing to take any serious steps that jeopardise the health of its economy remains to be seen.

Enter shale gas

It is little surprise, given the albatross around Europe's neck of continued dependence on Russia, that yet untapped domestic sources of gas have been [touted](#) by some strategists, including the European Council itself, as a way to increase energy security. Because energy policy is still a core competency of the member states, not the EU, there is a [wide range](#) of approaches to shale gas among states.

The United Kingdom comes closest to commercial-scale production of shale gas using hydraulic fracturing, but as Nick Riley, former head of Unconventional Gas at the British Geological Society, recently pointed out, there has not been a well [fracked for gas](#) in the UK since 2011, largely owing to political opposition and a slow rollout of government regulations on well integrity and chemical use. The current UK government, adamantly pro-fracking though it may be, is realising that in spite of attempts to bribe local governments with generous cash payouts on a per-well basis if they too embrace fracking, resistance in local jurisdictions is formidable.

France's outright ban on using hydraulic fracturing to extract gas and oil reflects both public scepticism toward the technologies used, the specific circumstances of France's very high percentage of nuclear power in its energy mix, as well as the nuclear industry's influence in domestic politics. Germany and the Netherlands have in place [softer moratoria](#) on shale gas, ones that essentially adhere to the precautionary principle and put the burden on exploration companies to prove that the environmental impacts of fracking are minimal.

Romania and Bulgaria, with 1,444 and 481 [billion cubic metres](#) (bcm) respectively of technically recoverable shale gas, would seem natural candidates for shale gas development given both countries' dependence on Russian imports, but public opposition to fracking remains high in both countries, and a ban on fracking in Bulgaria led US energy giant Chevron to [pull out its operations](#) before it had made any headway in exploration. Romania's government is currently more positively disposed toward fracking, but not much has happened on the ground. While there have been widespread allegations of Gazprom attempting to manipulate public opinion against shale gas in Southeastern Europe, my own impression having talked to people there is that the enemy you know (Gazprom) is better than the enemy you don't know, especially when the unknown also potentially carries risks to groundwater supplies and the landscape. Given the slick, well-funded pro-fracking media campaigns of the big players, it also seems too easy to blame a Gazprom conspiracy for being able to orchestrate public opinion against fracking.

Poland has been the EU member state most enthusiastic about exploiting its potential shale gas reserves, which at over 4,000 bcm are also Europe's largest (Poland currently uses about 18 bcm of gas per year, nearly all of which is imported from Russia via the Yamal pipeline). As we have [argued before](#), and as has been more or less confirmed in the interim, commercially viable shale gas development in Poland is an uphill prospect at best, despite the giddy enthusiasm of government officials after estimates of shale potential for the country were released in 2011. Poland has a history with its bigger neighbours, to put in shorthand what everyone knows, and the warm embrace, literally and figuratively, between Russia and Germany, Putin and especially former Chancellor Gerhard Schröder (now of Nord Stream AG) was viewed by many in Poland as yet another betrayal in a long history of long-distance handshakes across Polish territory. The US government, always eager to help Poland and even more eager to promote its companies abroad, expected a double bonus: spiting the Kremlin-Gazprom nexus while helping to further enrich job creating enterprises such as ExxonMobil, Chevron, and other smaller home-grown energy companies.

The enthusiasm has since been dampened by several realities. Geologically, Poland is not Pennsylvania, and several big players (ExxonMobil, Marathon, Talisman) have [pulled out](#) of the country in part because of disappointing test well results. In terms of experience with making oil and gas companies happy with taxation regimes and pro-business regulations, Poland is not Texas, and industry representatives complained of not knowing who was in charge and who in the government, below the rhetorical enthusiasm for domestic shale gas, was

actually willing to invest the political capital to make conditions ripe for development.

Also worth mentioning is that in Texas landowners stand to profit handsomely from an ugly drilling rig being plopped down on their property, which may [help to explain](#) why there are an estimated 1,200 gas wells within the city limits of Fort Worth, Texas. Not so in Poland, where subsurface mineral rights belong to the state. There is also the not insignificant matter of Poland being in the EU. While the EU maintains an official position of neutrality regarding member states' energy mix, recent years have seen a [number of interventions](#) relevant to shale gas, including the Commission's January 2014 Recommendation 2014/70/EU that encouraged members to conduct environmental impact assessments, baseline reports on water and air quality, and public disclosure, as well as a host of other steps. This recommendation signals to member states that these are the areas in which the Commission is considering legislative proposals on shale gas and fracking in the next year or so. It is also on top of the nineteen EU environmental quality directives already on the books that potentially apply to fracking, ranging from habitats to [biocidal products](#), on which the Commission could seek to regulate fracking in Poland and elsewhere.

While the oil and gas industry, and even some governments such as those in the UK and Poland, may [lament](#) Europe's extensive environmental regulations, my sense is that the higher bar to fracking than in most of the US reflects European attitudes toward tampering with natural systems and this higher bar will not be lowered in spite of worries about energy security. There is no single explanation for this. Yes, the EU is more densely populated than the US, but rural Poland is not more densely populated than Fort Worth. Yes, places like Texas and Oklahoma are more accustomed to hydrocarbon extraction than some areas of Europe, but North Carolina has virtually no history with oil and gas, yet is moving forward at breakneck speed with liberalised rules for shale gas development.

To the question of whether the Ukraine crisis will change any of the basic calculus on shale gas in the EU, assuming some sort of normalcy returns to eastern Ukraine, and Russia delivers precious gas to its wealthy customers in Austria and Germany as it has for four decades, then the current sense of urgency about shale gas will likely pass. The EU will tout its liberalised markets and better interconnections that will allow for cross-border movements of energy, while improved liquefied natural gas (LNG) capacity (including in Poland) will lessen the perceived threat that Russia poses. In response to events in Ukraine, the Netherlands and Germany have very publicly put supplier diversity high on the agenda, with the Dutch looking to import American LNG and Chancellor Merkel giving her blessing to German energy giant E.ON searching for LNG suppliers in Canada, Peru, Mozambique, and the Eastern Mediterranean. As for shale gas, though, no country can "will" gas out of the ground, and companies must make the numbers work before exploiting a resource. This appears to be a long-term bet at best.

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